

PCtel

HSP56TM MR
Installation Guide

Feb 14, 2000

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Section 1

1.0 Introduction

This document provides reference information for the evaluation testing of an internal modem based on *Host Signal Processing Data/Fax/Voice Modem Technology*. The HSP56™ MR evaluation card eliminates the redundant hardware parts found in most modems today. These include the data pump, a controller, and an additional UART and external memory as required in a conventional approach. In addition, the complete HSP solution allows an internal modem to be upgraded with enhancements and features through software upgrades rather than a chip change or board swap.

1.1 System Requirements

- M/B with Intel 810/820 chipset.
- 64MB RAM
- Windows 95(Includes OSR1/OSR2), Windows 98 SE, Windows NT4.0 and Windows 2000.

1.2 Features

DATA

Supported Communication Standards

*K56Flex, V.90, V.34, V.32bis, V.32, V.22bis, v.22, V.21, V.23, Bell212A, Bell 103

Data Compression

V.42bis
MNP 5

Error Correction

V.42 LAPM
MNP 2,3,4

FAX

Supported Protocols

V.8bis, V.80, V.17, V.29, V.27ter, V.21
Channel 2
EIA Class 1

Operating System Compatibility

Windows 95
Windows 98
Windows NT 4.0
Windows 2000

General Features

AT Commands
Auto Fallback
Auto Selection of COM Port and IRQ settings
Caller ID
Data/Fax/Voice/Speakerphone (requires full duplex sound card)
High throughput Virtual UART, DTE rate up to 115,200
ISA/PCI Bus interface
Low power consumption
Signal Quality Monitoring and Auto Retrain

Windows is a registered trademark of Microsoft Corp.
K56Flex is a registered trademark of Rockwell and Lucent Technologies.

Section 2

2.0 HSP56™ MR Setup using Windows 95 OEM Service Release 2

The HSP56™ MR driver will automatically handle all variations of CPU types. This eliminates the problem of poor performance that results from installing the incorrect driver. The driver will take advantage of the MMX enhancements if available.

1. If another HSP56™ MR driver was previously installed, be sure to remove the software by following the appropriate Uninstallation Procedure provided in the prior manual.

When the computer is turned off, plug the HSP56™ MR card into an empty AMR slot. After the system is turned on, it will automatically detect the MR card. The installation program will begin with the screen shown below. At this point, insert the HSP56™ MR driver disk in the CD-ROM drive and click “Next”. Follow the “Wizard” installation instructions.



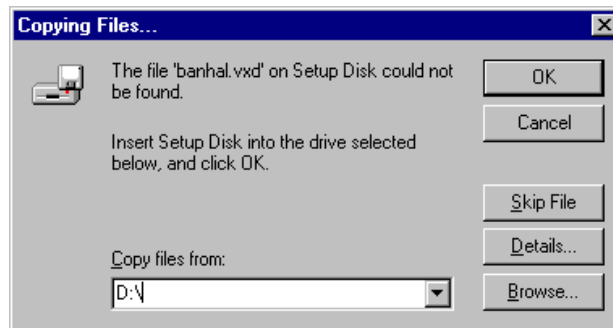
2. System found the device, Click “Finish”.



3. The installation program will request the “Setup” file. Click “OK”.



4. Type “D:\” in the prompted field and click “OK” to continue the installation.



5. After the installation is complete, the following modem listing should be shown under “Modem Properties” in the “Control Panel”.



New Feature:

The HSP56™ MR should be connected to an analog line. If the HSP56™ MR is connected to a digital line, the modem could be damaged. The message below will appear if the user attempts to use the modem while connected to a digital line.



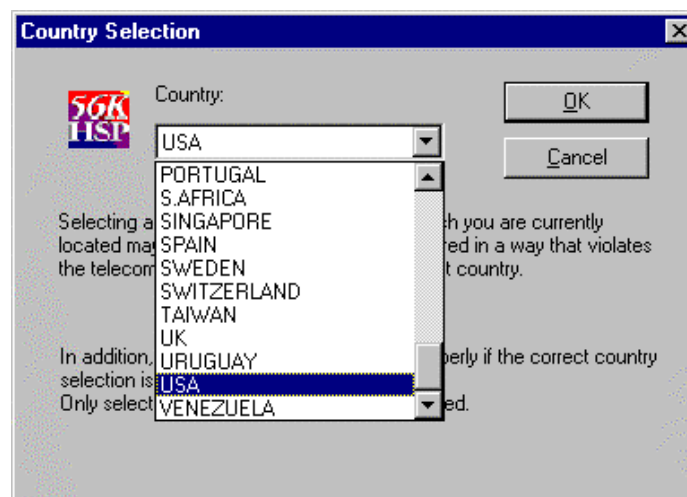
Country Selection Change:

The country selection can be changed after the installation is completed. Follow the procedure outlined below.

1. Click “HSP56 MR” under “Control Panel”.



2. Click and highlight the country in which the HSP56™ MR will be used. Click “OK” when finished.



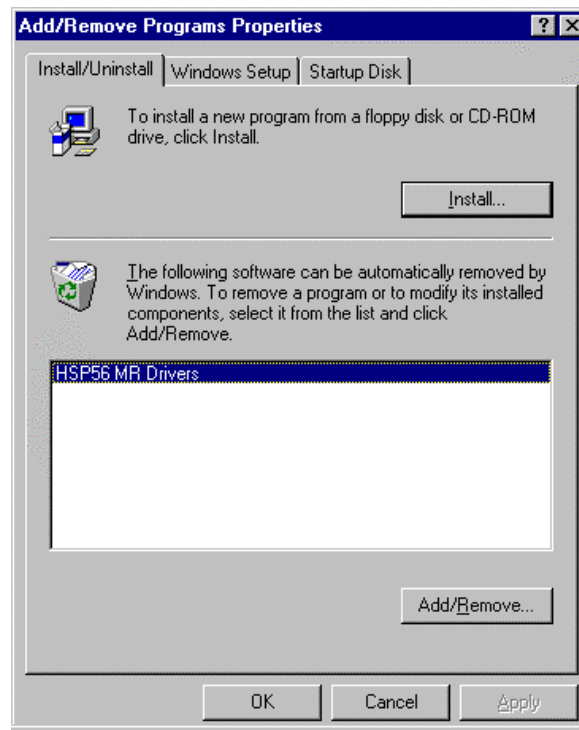
Uninstallation:

The HSP56™ MR can be uninstalled by using the following procedure.

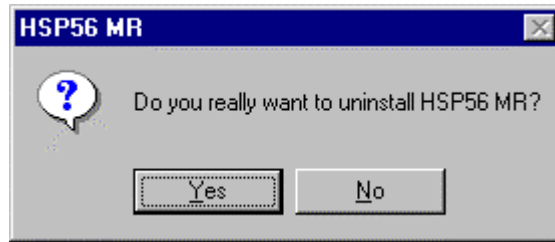
1. Click “Add/Remove Programs” under “Control Panel”.



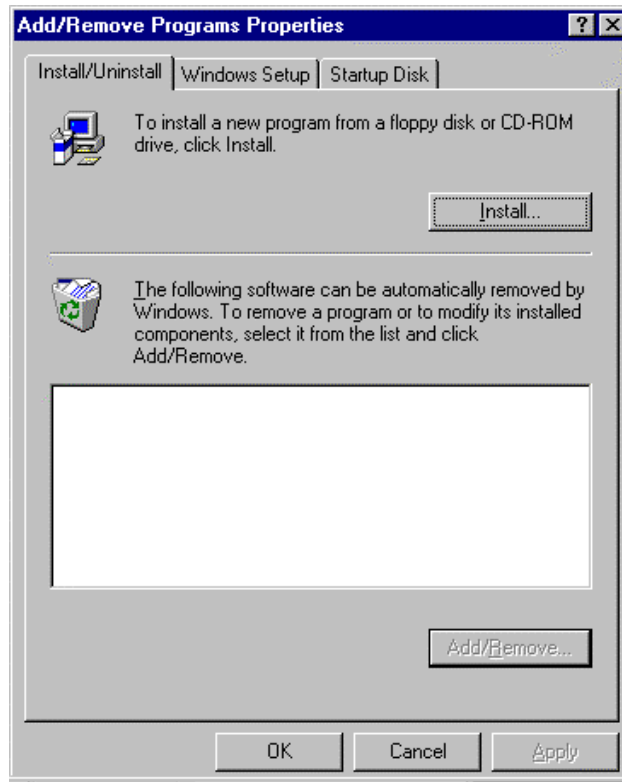
2. Choose HSP56 MR Drivers. Click “Add/Remove..”.



3. Click “Yes”. The uninstallation program will automatically remove the HSP56™ MR from the system.



4. The HSP56™ MR has been removed from the system. Click “OK”.



HSP56™ MR Setup using Windows 98

The HSP56™ MR will automatically handle all variations of CPU types. This eliminates the problem of poor performance that results from installing the incorrect driver. The driver will take advantage of the MMX enhancements if available.

1. If another HSP56™ MR driver was previously installed, be sure to remove the software by following the appropriate Uninstallation Procedure provided in the prior manual.

When the computer is turned off, plug the HSP56™ MR into an empty AMR slot. When the system is turned on, it will automatically detect the MR card. The installation program will begin with the screen shown below. At this point, insert the HSP56™ MR driver disk in the CD-ROM drive and click “Next”.



2. Windows will search for the driver. Choose the “Recommended” option and click “Next”.



3. Choose “CD-ROM drive” and click “Next”. Continue to follow the “Wizard” instructions to complete the installation process.



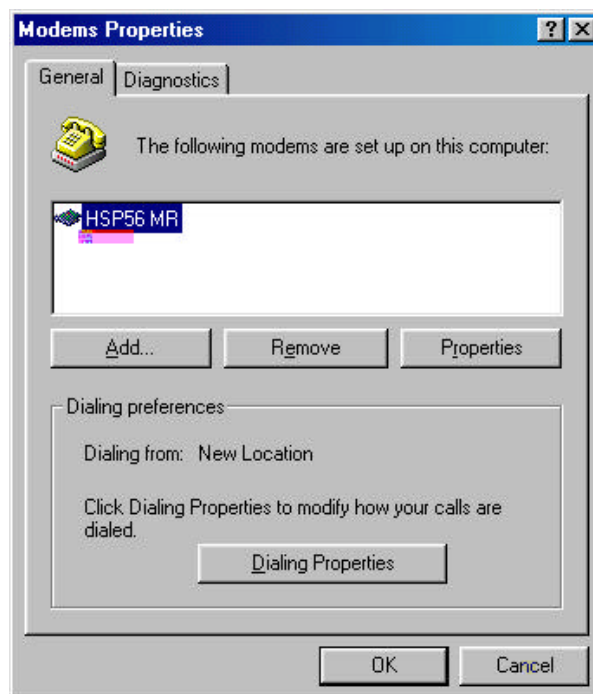
4. System found the driver. Click “Next”.



5. Click “ finish” to complete the installation.



6. After the installation is complete, the following modem listing should be shown under “Modem Properties” in the “Control Panel”.



New Feature:

The HSP56™ MR should be connected to an analog line. If the HSP56™ MR is connected to a digital line, the modem could be damaged. The message below will appear if the user attempts to use the modem while connected to a digital line.



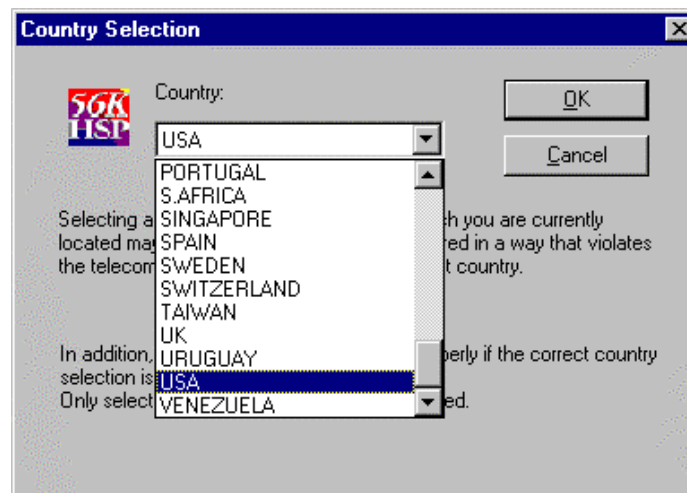
Country Selection Change:

The country selection can be changed after the installation is completed. Follow the procedure outlined below.

1. Click “HSP56 MR” under “Control Panel”.



2. Click and highlight the country in which the HSP56™ MR will be used. Click “OK” when finished.



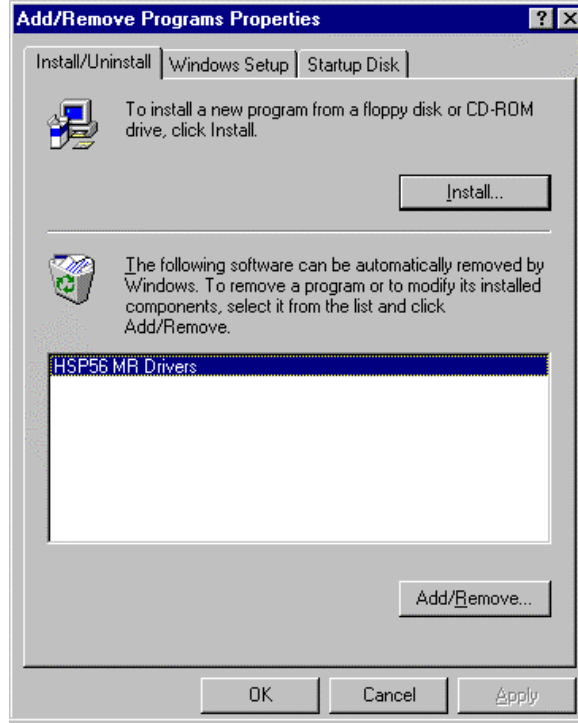
Uninstallation:

The HSP56™ MR can be uninstalled by using the following procedure.

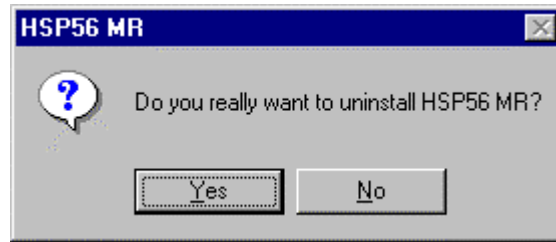
1. Click “Add/Remove Programs” under “Control Panel”. Choose



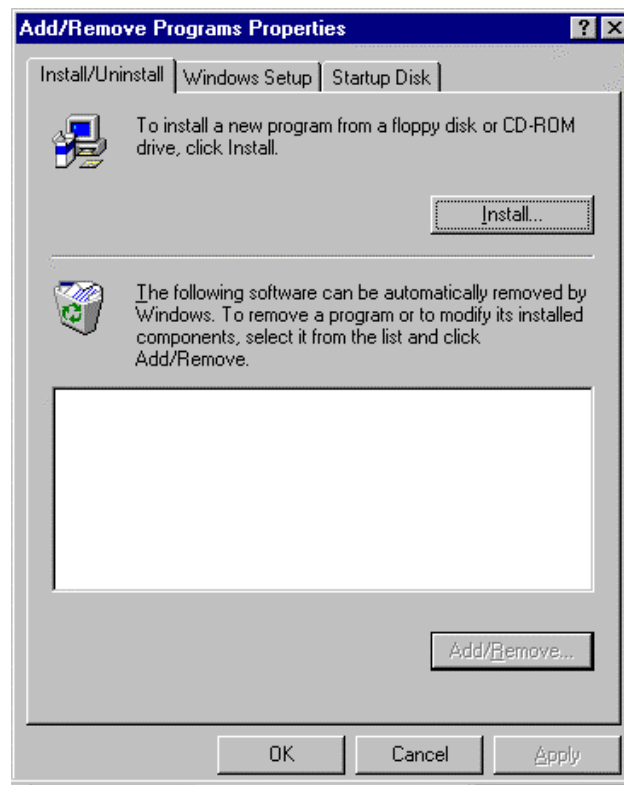
2. HSP56 MR Drivers. Click “Add/Remove...”.



3. Click “Yes”. The uninstallation program will automatically remove the HSP56™ MR from the system.



4. The HSP56™ MR has been removed from the system.

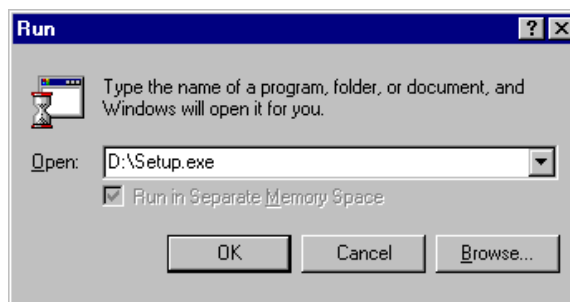


HSP56™ MR Setup using Windows NT Workstation 4.0

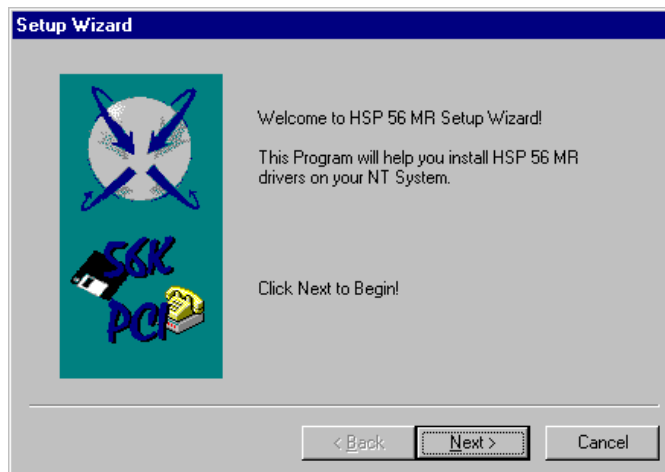
Windows NT 4.0 cannot automatically detect the CPU type from different vendors; therefore, we have provided different drivers for the appropriate CPU type. Be sure to use the correct driver for your CPU type. If you are unsure of the CPU type, contact your system vendor.

When the computer is turned off, plug the HSP56™ MR card into an empty AMR slot. After turning the system on, follow the procedure below.

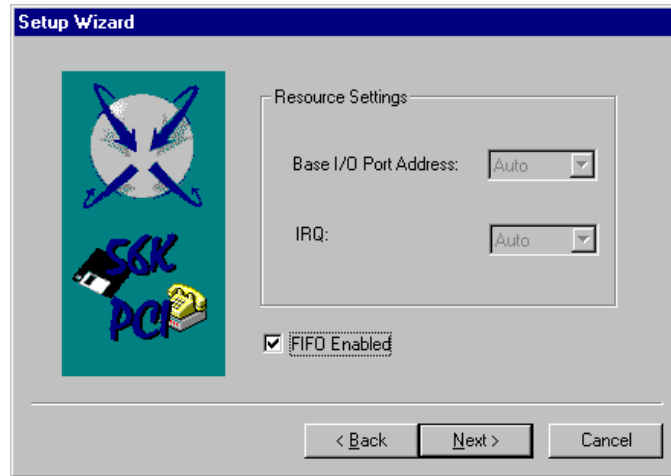
1. To install the HSP56™ MR is done in “Run” under the “Start” menu. Type the path as shown below to start the installation and click “OK”.



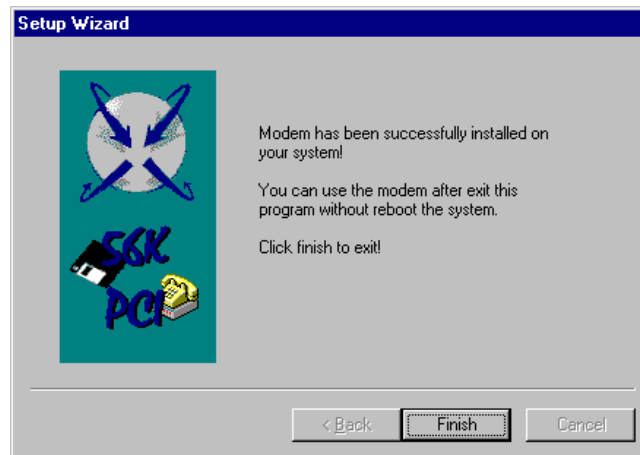
2. Click “Next” to begin the installation program.



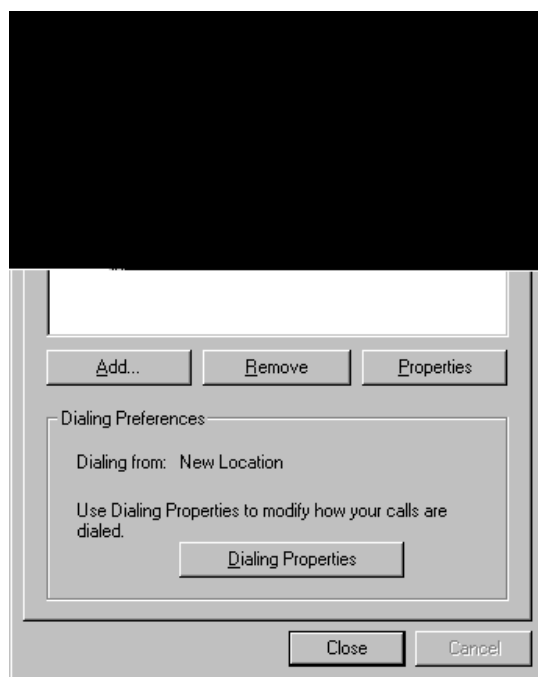
3. Click “Next”. Continue to follow the “Setup Wizard” instructions to complete the installation process. To continue the installation program.



4. Click “Finish” to complete Setup.



5. The following modem should be listed under “Modem Properties” in the “Control Panel”.

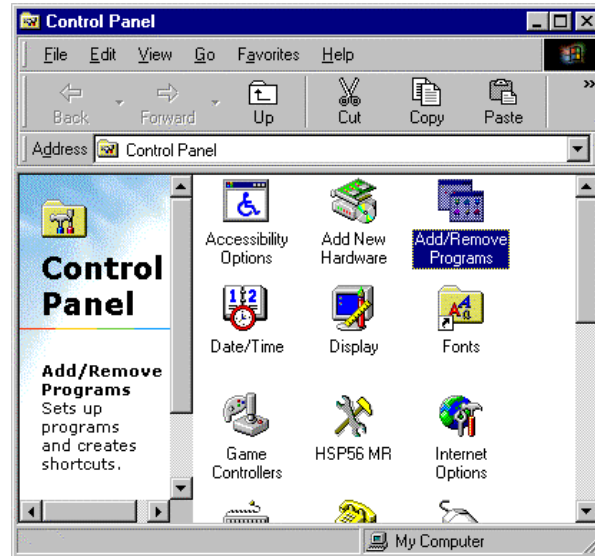


Uninstallation:

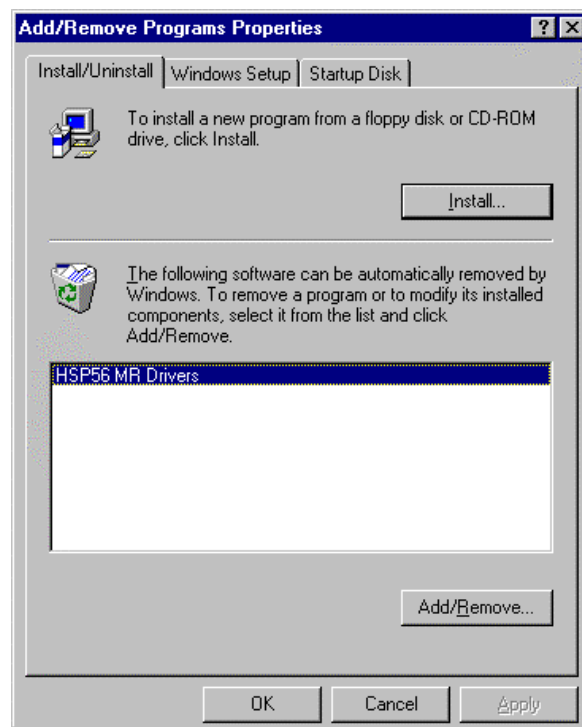
The HSP56™ MR Modem can be uninstalled by using the following two procedures.

Procedures 1:

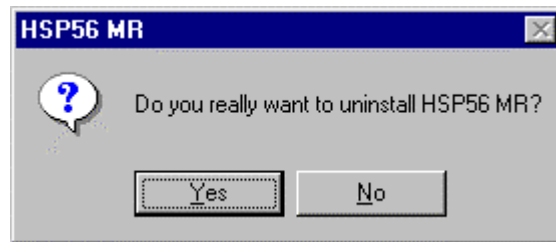
1. Click “Add/Remove Programs” under “Control Panel”.



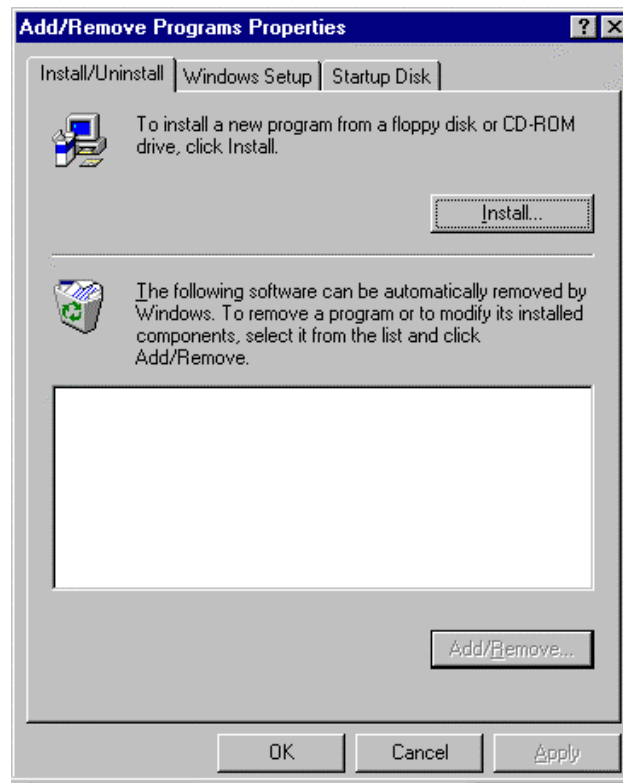
2. Choose HSP56 MR Drivers. Click “Add/Remove..”.



3. Click “Yes”. The uninstallation program will automatically remove the HSP56™ MR from the system.

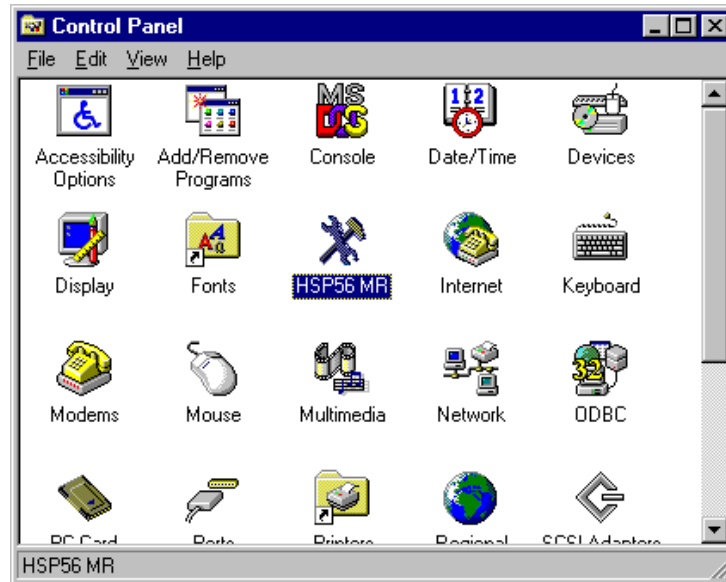


4. The HSP56™ MR has been removed from the system. Click “OK”.

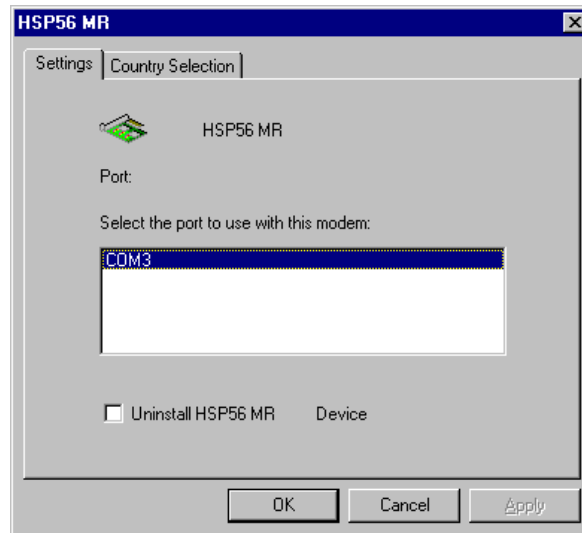


Procedures 2:

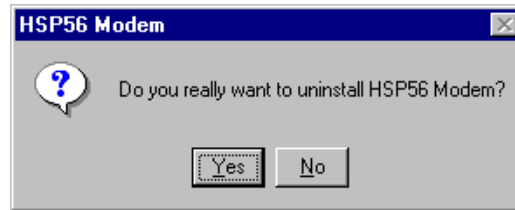
1. Under “Control Panel”, double click “HSP56 MR”.



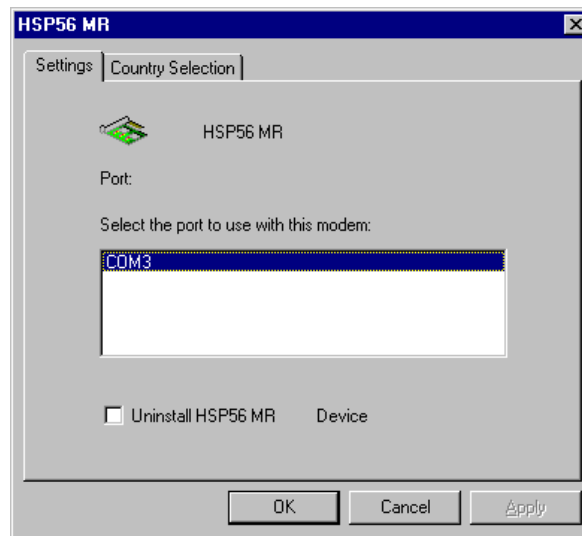
2. Check the box of “Uninstall HSP56 Modem Device”.



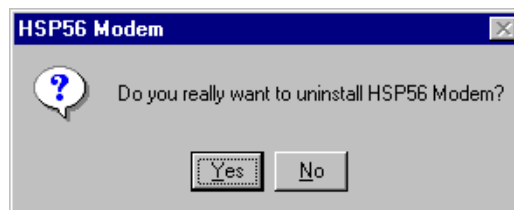
3. The following window will pop out, Click “Yes”.



4. Click “OK”.



5. Click “Yes”, The uninstallation program will automatically remove the HSP56™ MR from the system.



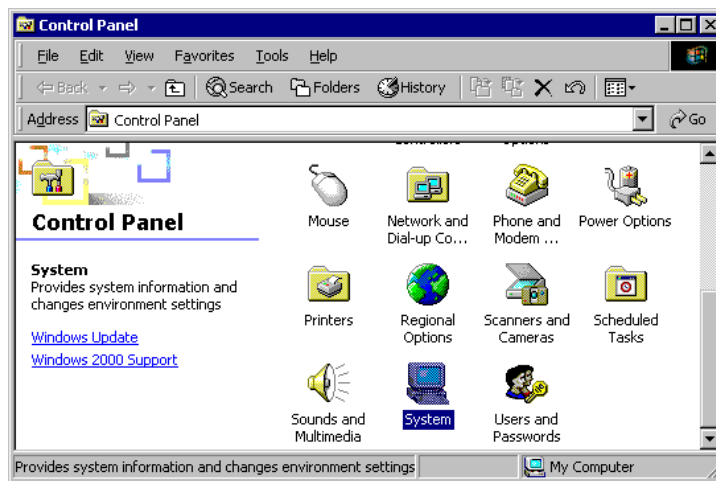
HSP56™ MR Setup using Windows 2000

The HSP56™ MR will automatically handle all variations of CPU types. This eliminates the problem of poor performance that results from installing the incorrect driver. The driver will take advantage of the MMX enhancements if available.

Installation:

For those who upgrade Window 9x or Windows NT4.0 to Windows 2000, if previously HSP56™ MR driver is installed, be sure to **remove** the driver before install Windows 2000.

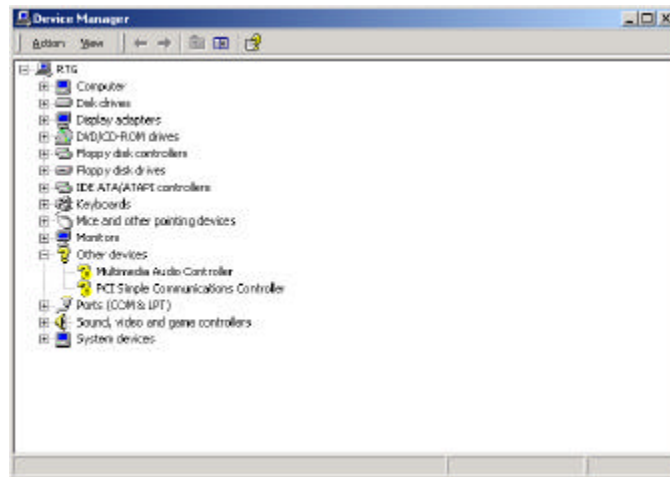
If HSP56™ MR is already been plugged into an AMR slot before install Windows 2000, after Windows 2000 been installed, Click “System” under “Control Panel”.



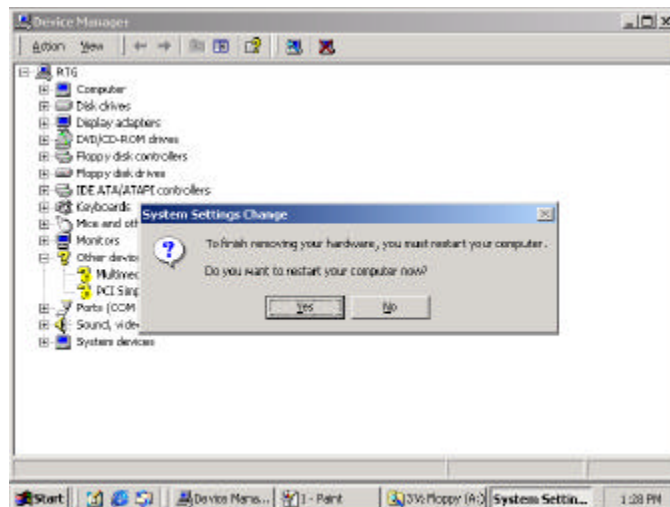
Click “Device Manager...” under “Hardware”, “System Properties”.



You will find a yellow question mark in front of “PCI Simple Communications Controller” in Device Manager after Windows 2000 been installed. The reason is that Windows 2000 do not have HSP56™ MR driver build in. You need to remove “PCI Simple Communications Controller”.



Choose “PCI Simple Communications Controller”. Click “Action” and choose “Uninstall”. A screen will be shown below. Click “Yes” to restart your computer.



System will find a new hardware after computer restarted. The HSP56™ MR can be installed by using the following procedure start from step 1.

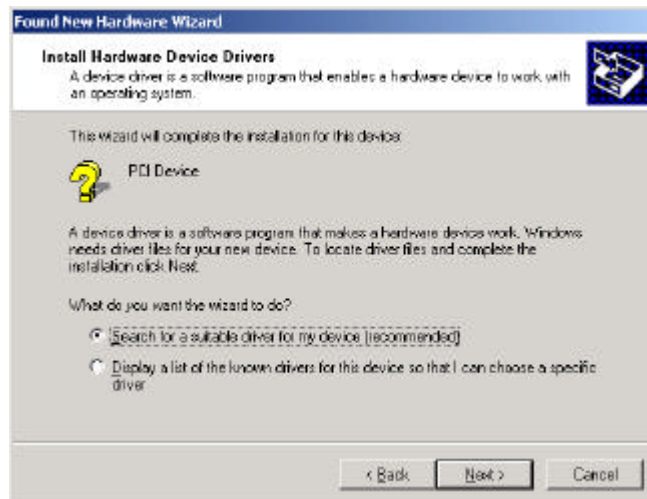
If Windows 2000 is already been installed before you plug HSP56™ MR into an empty AMR slot, system will find a new hardware after computer restarted. If another HSP56™ MR driver was previously installed, be sure to remove it before install the new driver.

The HSP56™ MR can be installed by using the following procedure.

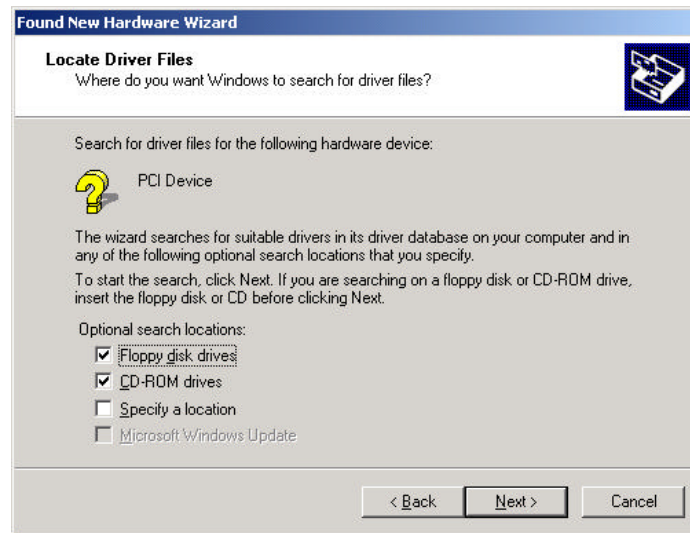
1. When the computer is turned off, plug the HSP56™ MR into an empty AMR slot. When the system is turned on, it will automatically detect the MR card. The installation program will begin with the screen shown below. At this point, insert the HSP56™ MR driver CD/Floppy in the CD-ROM/Floppy drive and click “Next”.



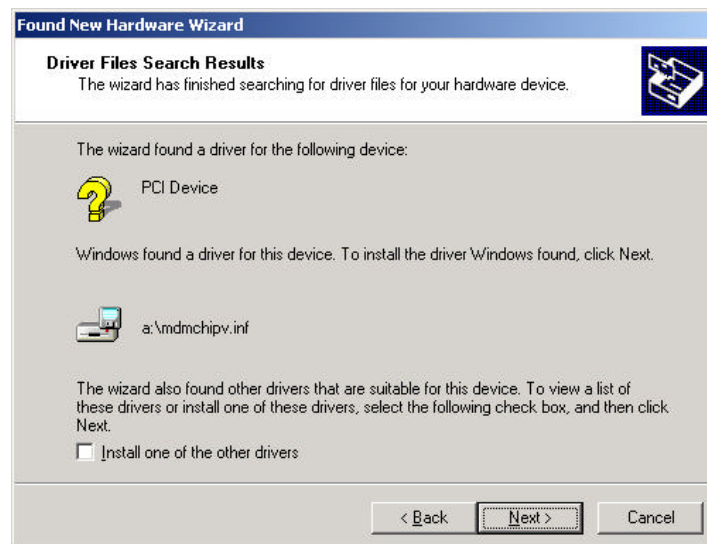
2. Windows will search for the driver. Choose the “Recommended” option and click “Next”.



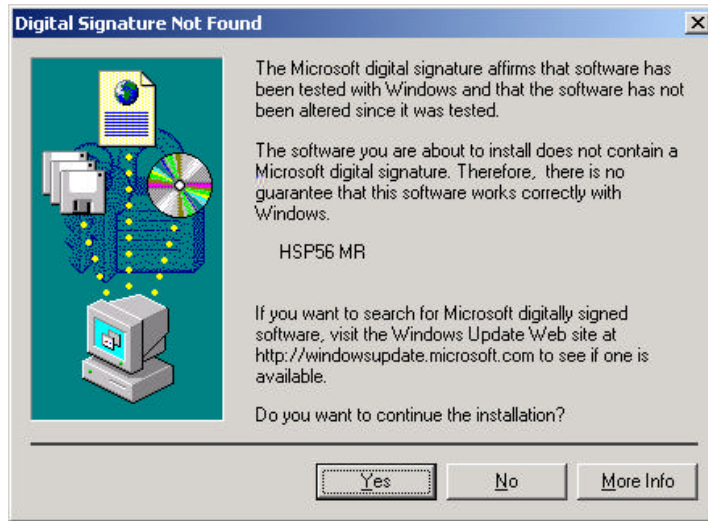
3. Choose the correct driver location and click “Next”.



4. System found the driver. Click “Next”. Continue to follow the “Wizard” instructions to complete the installation process.



5. Click “Yes” to continue the installation.



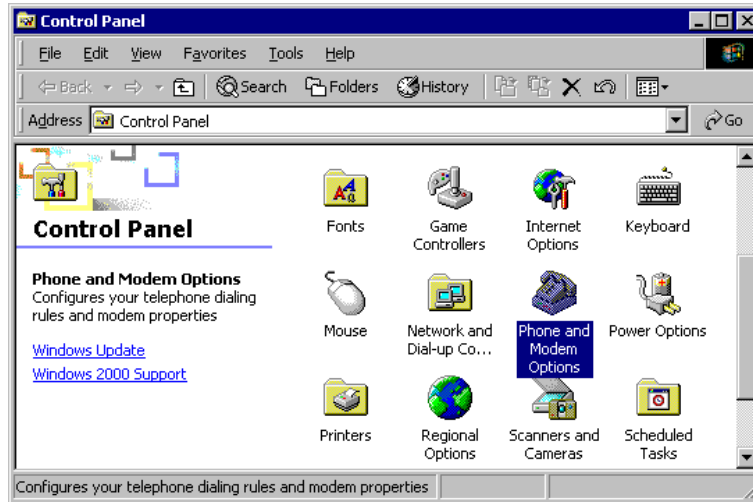
6. Click “Finish” to complete the installation of the HSP56™ MR.



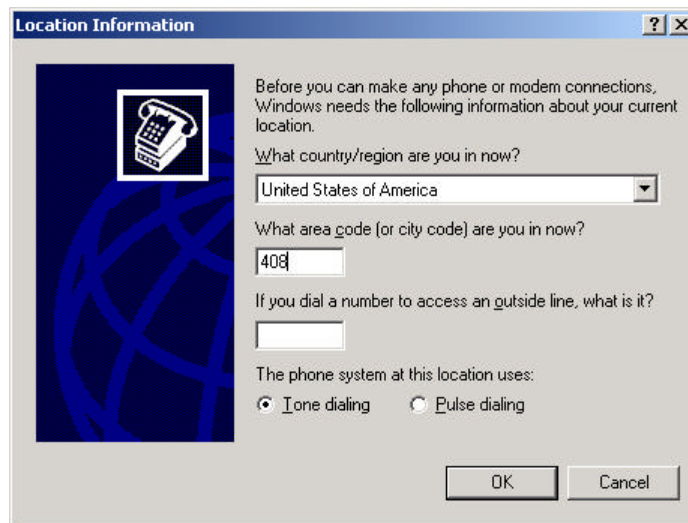
Verification:

To verify whether the HSP56™ MR is functioning properly, you can use following procedure.

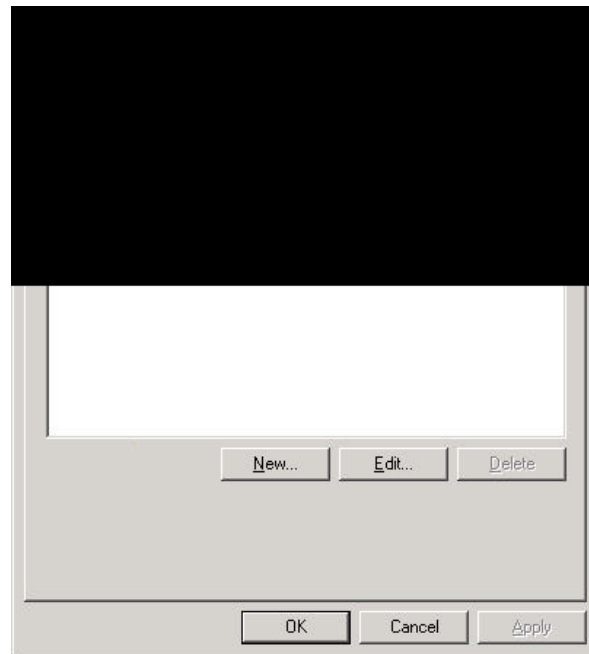
1. Go to “Control Panel”, click “Phone and Modem Options”.



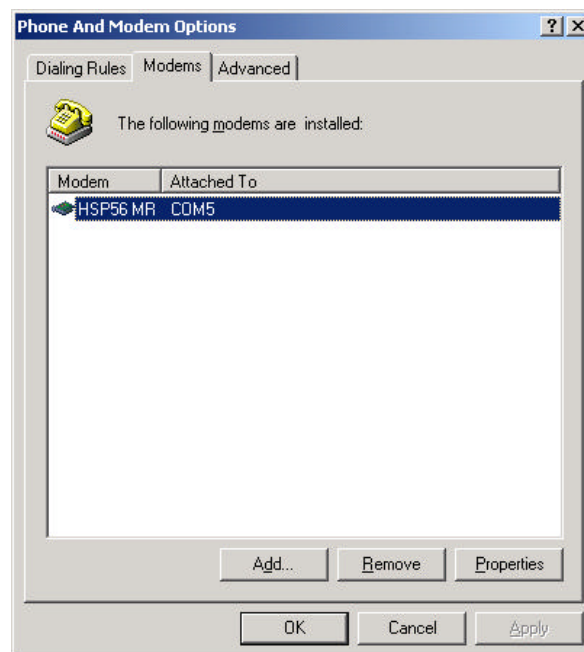
2. Key in the area code, click “OK”.



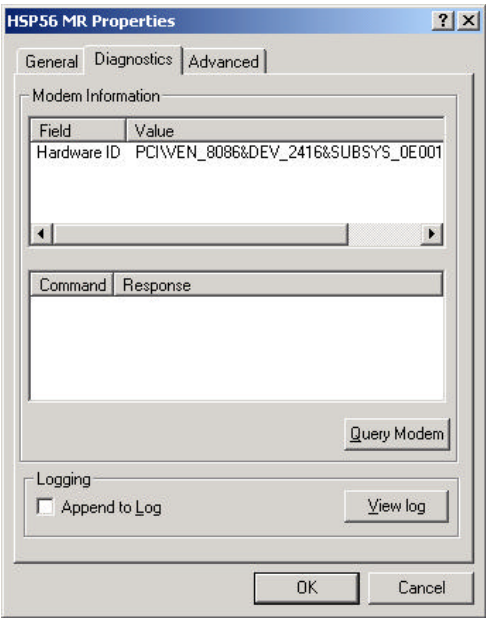
3. The following window will show. Choose “Modems”.



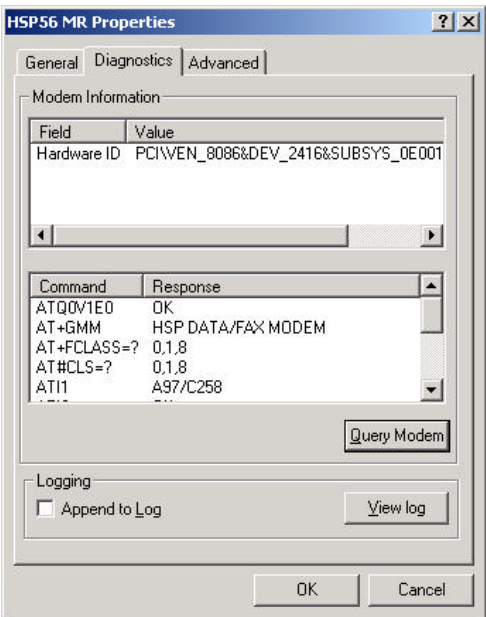
4. The following modem should be listed under “Modem” in the “Phone and Modem Options”. Click “Properties”.



5. Under Diagnostics, Click “Query Modem”



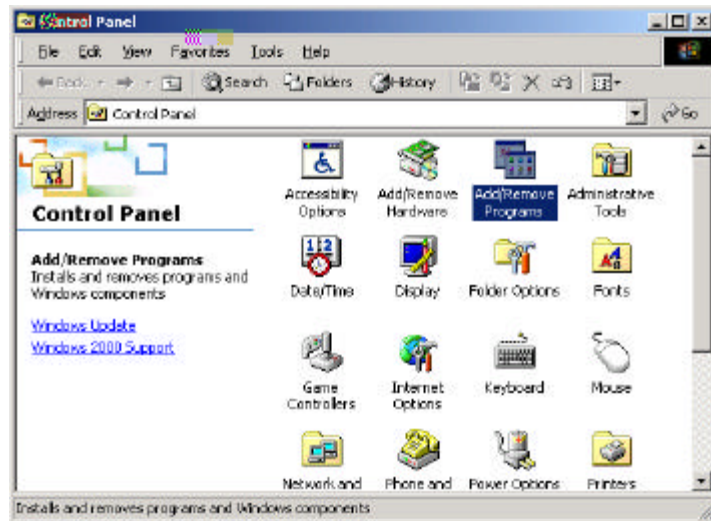
6. If modem detail information is showed, modem works fine. Click “OK” to complete verification modem.



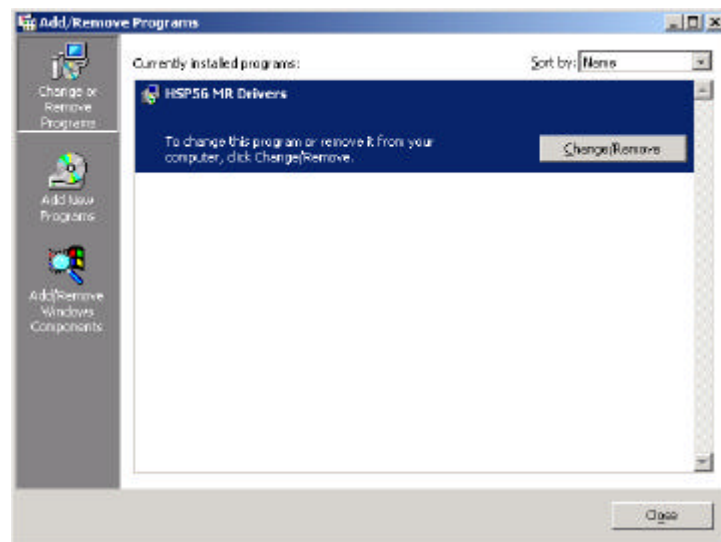
Uninstallation:

The HSP56™ MR can be uninstalled by using the following procedure.

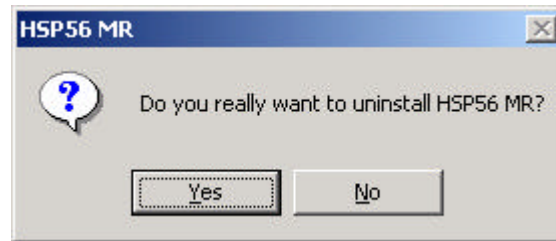
1. Click “Add/Remove Programs” under “Control Panel”.



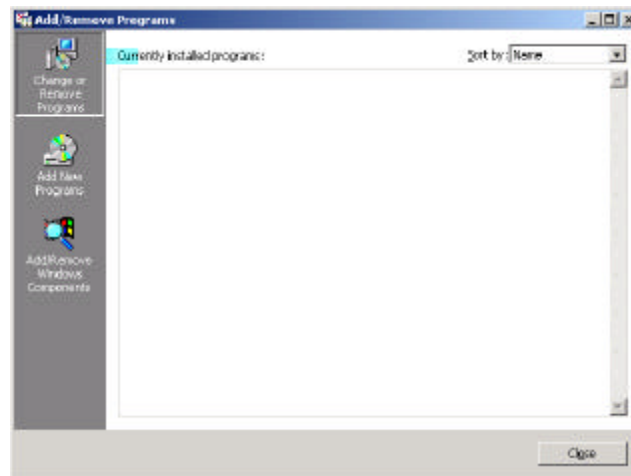
2. Click “Change/Remove” under “Add/Remove Programs”.



3. Click “Yes” to uninstall HSP56 MR.



4. The following screen shows HSP56 MR has been removed. Click “Close” to close this window.



Section 3

3.0 Windows95 and Modem Diagnostic Sequence for HSP56™ MR Card

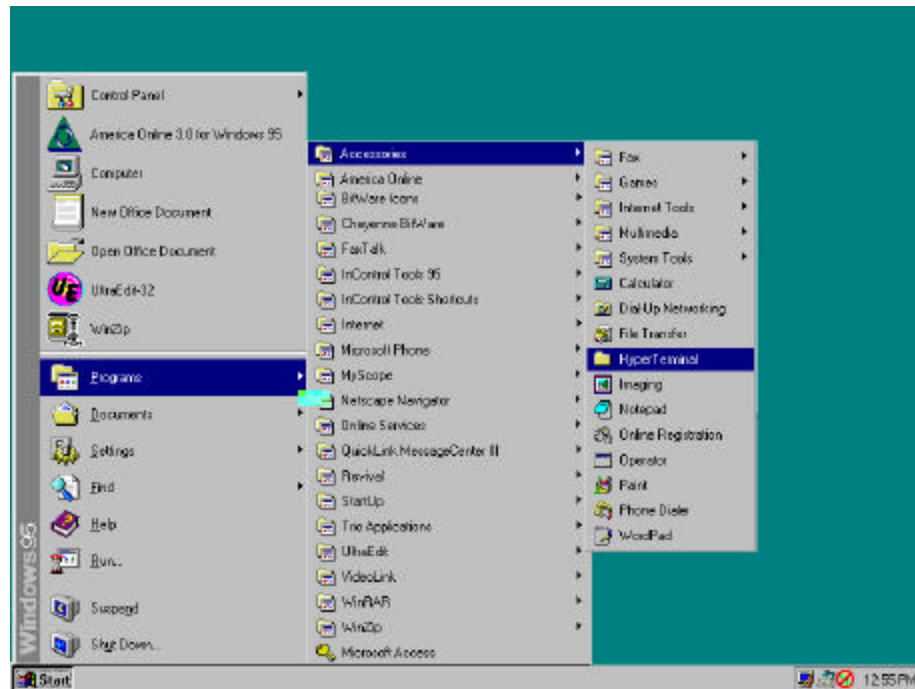
If you experience difficulty with the HSP56™ MR, follow these steps to try to isolate the possible cause. Continue until you encounter the problem.

1. Start Windows95, and select the Microsoft Terminal program in the Accessories group. Make sure the communication setting is at 115200 with the proper COM port selected.
2. If the port opened properly, go to the next step. Otherwise, check if you have any other communication software trying to use the same port. If any other communications software is open, close it. If not, switch to a different COM port. If the problem persists, make sure the card is pressed firmly into its slot. You should also try another slot, and clean the contacts with a pencil eraser. If you can't get it to work, then call technical support for help.
3. Type AT<enter>, you should see an 'OK' response. If nothing happened at this point, this indicates that the modem is not getting the proper IRQ. In Windows 95, use the modem control panel to change the IRQ.

3.1 Windows 95 Hyperterminal test for HSP56™ MR card

If you experience difficulty with an HSP56™ MR, follow these steps to try to isolate the possible cause. Continue until you encounter the problem.

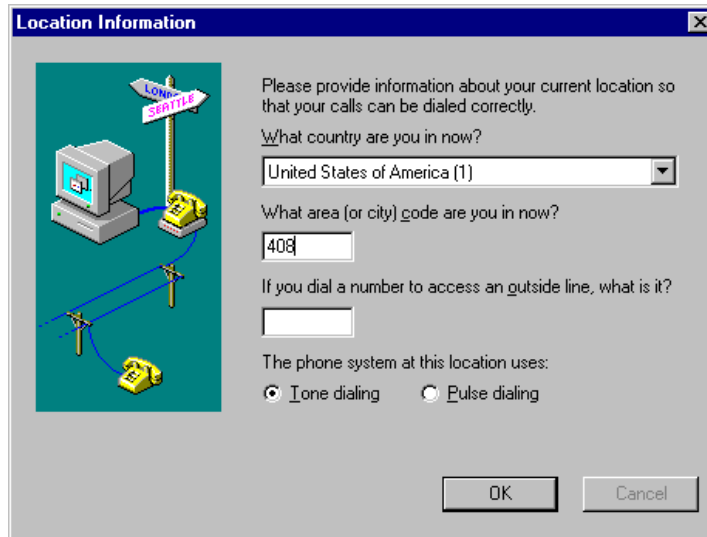
1. Go to the “Start” menu, choose “Programs” and then “Accessories”.



2. Double click on “Hyper Terminal”. Run Hyper Terminal to open the Connection windows.



3. Key in the area code then click “Ok”.



The "Location Information" dialog box is used to configure dialing information. It features a graphic on the left showing a computer, a telephone, and a road sign pointing to "LOWE" and "SEATTLE". The text on the right asks for location details to ensure calls are dialed correctly. It includes a dropdown menu for the country (currently "United States of America (1)"), a text field for the area or city code (currently "408"), and a text field for an outside line access number. It also has radio buttons for "Tone dialing" (selected) and "Pulse dialing". "OK" and "Cancel" buttons are at the bottom right.

Location Information

Please provide information about your current location so that your calls can be dialed correctly.

What country are you in now?
United States of America (1)

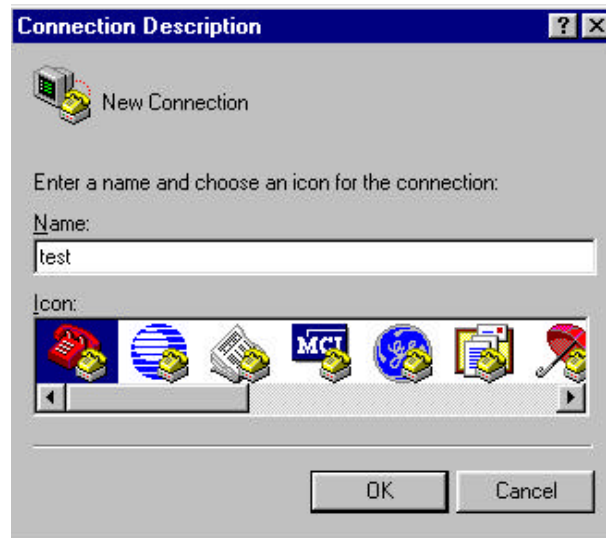
What area (or city) code are you in now?
408

If you dial a number to access an outside line, what is it?

The phone system at this location uses:
☒ Tone dialing ☐ Pulse dialing

OK Cancel

6. Enter a name and choose an icon. Click OK.



The "Connection Description" dialog box allows users to name a new connection and select an icon. It includes a "Name:" text field with "test" entered and an "Icon:" section with a row of icons including a telephone, a globe, a newspaper, an MCI logo, a globe with a telephone, a document, and a red umbrella. "OK" and "Cancel" buttons are at the bottom right.

Connection Description

New Connection

Enter a name and choose an icon for the connection:

Name:
test

Icon:

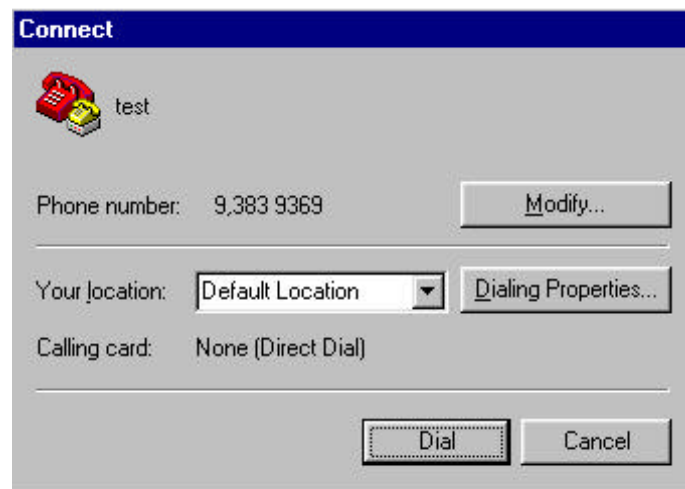
OK Cancel

7. Verify the modem selection. Enter any phone number, and click OK.



The "Phone Number" dialog box has a title bar with a question mark and a close button. It features a red telephone icon and the text "test". Below this, it says "Enter details for the phone number that you want to dial:". The form includes a "Country code:" dropdown menu set to "United States of America (1)", an "Area code:" text box containing "408", a "Phone number:" text box, and a "Connect using:" dropdown menu set to "HSP56 MR". At the bottom are "OK" and "Cancel" buttons.

8. Click on "Cancel", and the modem will not dial. This will leave you at the terminal window.



The "Connect" dialog box has a title bar with a question mark and a close button. It features a red telephone icon and the text "test". Below this, it says "Phone number: 9,383 9369" with a "Modify..." button to its right. A horizontal line separates this from the next section, which shows "Your location: Default Location" with a dropdown arrow and a "Dialing Properties..." button to its right. Another horizontal line follows, with "Calling card: None (Direct Dial)" below it. At the bottom are "Dial" and "Cancel" buttons.

6. Once you get to the terminal window, you can enter commands to the modem. Type AT<enter>. You should see an 'OK' response. If nothing happened at this point, this indicates that the modem is not getting the proper IRQ. In Windows 95, use the modem control panel to change the IRQ.

